

FATIGUE TEST FOR PROSTHETIC STENT

ABSTRACT OF THE DISCLOSURE

An improved method for testing a stent for a prosthetic valve includes applying
5 a load with a fluid against a stented test structure in a backward direction with the stented test
structure substantially blocking the flow of the fluid. The stented test structure includes a
stent and a flexible membrane extending within the lumen defined by the stent with the
flexible membrane having a plurality of contours connecting to the stent along the scallops. A
corresponding testing apparatus includes a cyclic pressure applicator, a conduit connected to
10 the cyclic pressure applicator, and a stented test structure mounted within the conduit to
receive cyclic fluid pressures from the cyclic pressure applicator. The stented test structure
includes a stent and a flexible membrane extending within the lumen defined by the stent. The
flexible membrane substantially blocks flow of the fluid in a backward direction and does not
fully open upon application of the fluid pressure in a forward direction.